The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A detector framing node to communicate image data with a host memory of a host computer, comprising:

first and second clocks respectively operating at first and second clock frequencies;

an image detection interface receiving image data at the first clock frequency;

a control unit controlling communication of the image data from the image detection interface within the detector framing node; and

a computer communication interface communicating the image data to the host memory at the second clock frequency.

2. (original) The detector framing node according to claim 1, wherein said image detection interface is a fiber optic interface receiving the image data from an image detection system over an optical fiber data link.

3. (original) The detector framing node according to claim 2, wherein the image data is received in real time.

4. (original) The detector framing node according to claim 2, wherein the image data is transmitted from the image detection system to the fiber optic interface serially at a rate of at least 1 Gbit/sec.

5. (original) The detector framing node according to claim 1, further comprising:

a memory unit to receive and store the image data received by the image detection interface ,

wherein the control unit reads out the stored image data from the memory unit during communication to the host memory .

6. (original) The detector framing node according to claim 5, wherein the memory unit comprises a plurality of frame buffer memory units.

7. (original) The detector framing node according to claim 6, wherein the detector framing node is a PCI card, and each of the frame buffer memory units is comprised of a pair of random access memory chips alternately disposed on alternate sides of the PCI card.

8. (original) The detector framing node according to claim 1, further comprising:

a third clock respectively operating at a third clock frequency, wherein the control unit controls communication of the image data from the image detection interface to the computer communication interface at the third clock frequency.

9. (original) The detector framing node according to claim 8, wherein the first, second, and third clocks are respectively controlled by oscillations from a single clock oscillator.

10. (original) The detector framing node according to claim 1,

said image detection interface being a fiber optic interface receiving the image data in real time from an image detection system over an optical fiber data link , the detector framing node further comprising:

a memory unit to receive and store the image data received by the fiber optic interface ,

wherein the control unit reads out the stored image data from the memory unit and transfers the image data to the computer communication interface during communication of the image data to the host memory .

11. (original) The detector framing node according to claim 1, wherein the host computer runs a non-real time operating system.

12. (original) The detector framing node according to claim 1, wherein the host computer runs a real time operating system.

13. (original) The detector framing node according to claim 1, wherein the host computer runs a task based operating system.

14. (original) The detector framing node according to claim 1, wherein the image data is radioscopic image data and the image detection system is an x-ray detection system .

15. (currently amended) A detector framing node card to communicate image data with a host memory of a host computer , comprising:

an image detection interface to receive image data from an image detection system ;

a plurality of frame buffer memory units to receive the image data from the image detection interface , each of the frame buffer memory units comprised of a pair of random access memory chips alternately disposed on alternate sides of the detector framing node card ; ~~and~~

a computer communication interface communicating the image data from the plurality of frame buffer memory units to the host memory ~~.~~; and,

first and second clocks respectively operating at first and second clock frequencies; and

a control unit controlling communication of the image data from the plurality of frame buffer memory units to the computer communication interface at the first clock frequency,

wherein the communication interface communicates the image data to the host memory at the second clock frequency.

16. (original) The detector framing node card according to claim 15, wherein said image detection interface is a fiber optic interface receiving the image data from the image detection system over an optical fiber data link .

17. (original) The detector framing node card according to claim 16, wherein the image data is received in real time.

18. (original) The detector framing node card according to claim 16, wherein the image data is transmitted from the image detection system to the fiber optic interface serially at a rate of at least 1 Gbit/sec.

19. (canceled)

20. (currently amended) The detector framing node card according to claim ~~19~~ 15, further comprising:

a third clock respectively operating at a third clock frequency, wherein the image data is communicated from the plurality of frame buffer memory units to the computer communication interface at the third clock frequency.

21. (original) The detector framing node card according to claim 20, wherein the first, second, and third clocks are respectively controlled by oscillations from a single clock oscillator.

22. (original) The detector framing node card according to claim 15, wherein the detector framing node card is a PCI card, and the computer communication bus is a PCI bus operating at a frequency of at least 33 MHz.

23. (original) The detector framing node card according to claim 15, wherein the host computer runs a non-real time operating system.

24. (original) The detector framing node according to claim 15, wherein the host computer runs a real time operating system.

25. (original) The detector framing node according to claim 15, wherein the host computer runs a task based operating system.

26. (original) The detector framing node according to claim 15, wherein the image data is radioscopic image data and the image detection system is an x-ray detection system .

27. (currently amended) A detector framing node to communicate image data with a host memory of a host computer , comprising:

an image detection interface receiving image data from an image detection system ;

a control unit controlling communication of the image data from said image detection interface within the detector framing node ; ~~and~~

a computer communication interface communicating the image data to the host memory; and,

first, second, and third clocks respectively operating at first, second, and third clock frequencies,

wherein the image data is received by the image detector interface at the first clock frequency and stored in a plurality of frame buffer memory units , the computer communication interface communicates the image data to the host memory at the second clock frequency, and the image data is communicated from the plurality of frame buffer memory units to the computer communication interface at the third clock frequency.

28. (original) The detector framing node according to claim 27, wherein said image detection interface is a fiber optic interface receiving the image data from the image detection system over an optical fiber data link.

29. (original) The detector framing node according to claim 27, wherein the image data is transmitted from the image detection system to the fiber optic interface serially at a rate of at least 1 Gbit/sec.

30. (original) The detector framing node according to claim 27, wherein the image data is received in real time.

31. (original) The detector framing node according to claim 27, further comprising:

a memory unit to receive and store the image data received by the image detection interface,

wherein the control unit reads out the stored image data from the memory unit during communication to the host memory.

32. (original) The detector framing node according to claim 31, wherein the image data is transmitted from the image detection system as a plurality of image frames, and wherein the memory unit comprises a plurality of frame buffer memory units each of sufficient size to hold an image frame of the plurality of image frames.

33. (original) The detector framing node according to claim 32, wherein the detector framing node is a PCI card, and each of the frame buffer memory units is comprised of a pair of random access memory chips alternately disposed on alternate sides of the PCI card.

34. (canceled)

35. (original) The detector framing node according to claim 27,

said image detection interface being a fiber optic interface receiving the image data in real time from the image detection system over an optical fiber data link, the detector framing node further comprising:

a memory unit to receive and store the image data received by the fiber optic interface,

wherein the control unit reads out the stored image data from the memory unit and transfers the image data to the computer communication interface during communication to the host memory.

36. (original) The detector framing node according to claim 27, wherein the host computer runs a non-real time operating system.

37. (original) The detector framing node according to claim 27, wherein the host computer runs a real time operating system.

38. (original) The detector framing node according to claim 27, wherein the host computer runs a task based operating system .

39. (original) The detector framing node according to claim 27, wherein the image data is radioscopic image data and the image detection system is an x-ray detection system .

Claims 40-73 (canceled)